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ENVIRONMENTAL PROTECTION
AGENCY
2009 SEP 17 AM 11:54
DEPP-APB

September 16, 2009

Mr. Steven Riva
Chief, Permitting Section
U.S. Environmental Protection Agency
290 Broadway, 25th Floor
New York, NY 10007

Mr. John Preczewski
Assistant Director
New Jersey Department of Environmental Protection
Bureau of Operating Permits
P.O. Box 027
401 East State Street – 2nd Floor
Trenton, NJ 08625

**Subject: Garden State Offshore Energy
Notice of Intent (NOI) for the Proposed Offshore
Meteorological Station**

Dear Sirs:

TRC Environmental Corporation (TRC) is submitting this Notice of Intent (NOI) to submit an application for a pre-construction and operating permit pursuant to 40 CFR Part 55.4 on behalf of Garden State Offshore Energy (GSOE). GSOE is providing this NOI in concurrence with U.S. Environmental Protection Agency's May 5, 2009 determination that the air emissions associated with the construction, operation, and decommissioning of a meteorological station (MET Station) is subject to 40 CFR Part 55.4 requirements. The MET Station will be installed to collect meteorological data for GSOE's proposed offshore wind farm.

The information contained in this NOI reflects preliminary project information and is based on representative operating parameters. This information may change based upon the data obtained during the project's development phase. While specific engine models or the number of engines may change, GSOE believes that any changes will be minor and will not affect applicability. Final project design will be reflected in the air permit application.

General Company Information

GSOE is a joint venture of PSEG Renewable Generation and Deepwater Wind Company.

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UNIVERSITY MICROFILMS
SERIALS ACQUISITION
300 N ZEEB RD
ANN ARBOR MI 48106-1500

The contact information for the Responsible Official is:

Nelson Garcez, VP Generation & Technical Services
PSEG Global LLC
80 Park Plaza
Newark, NJ 07102
Phone: (973) 430-7662
Email: Nelson.Garcez@pseg.com

The permitting contact for the Project is:

Erin Gorman, P.E., Senior Licensing Permitting Specialist
PSEG Services Corporation
80 Park Plaza
Newark, NJ 07102
Phone: (973) 430-6359
Fax: (973) 624-9047
Email: Erin.Gorman@pseg.com

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MET Station Relevance

Installing a MET Station is a critical component in the development of GSOE's offshore wind farm project. The MET Station contributes to GSOE's meteorological assessment campaign, a campaign that serves three purposes. First, it provides input as to the optimum location of the wind farm. Second, it informs the selection of the turbines by defining the wind shear and turbulence characteristics. Finally, it will result in the creation of an energy production report which will be used for the ultimate financing of the wind farm project.

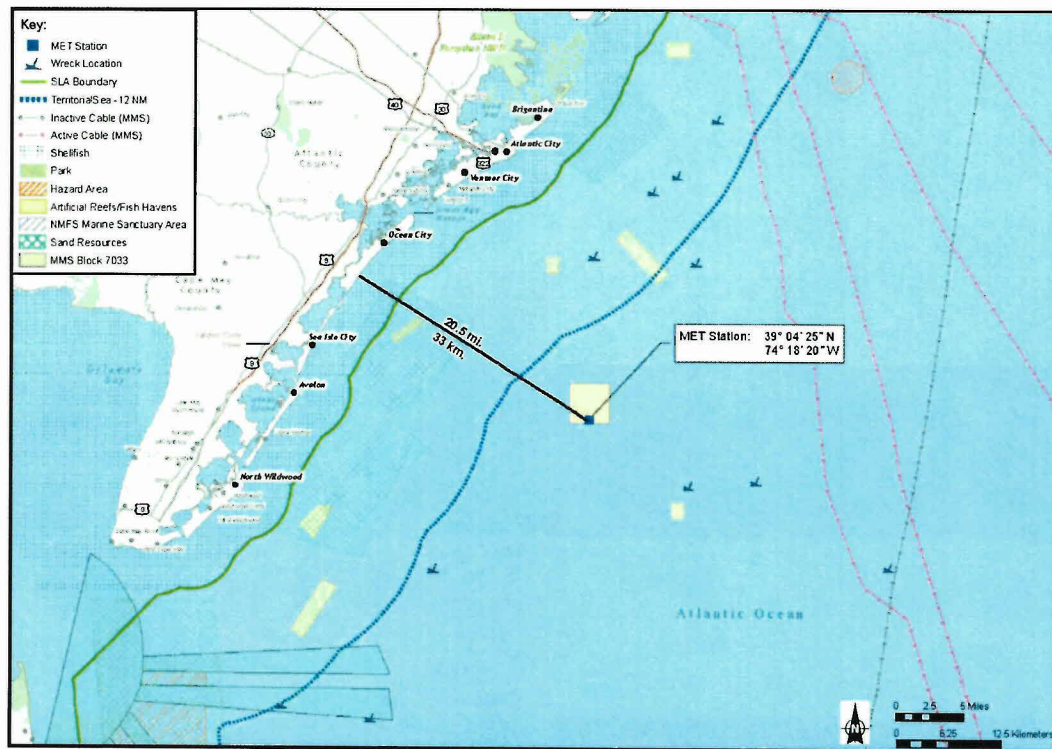
Project/Facility Description

To help achieve the goals set forth in New Jersey's Energy Master Plan, GSOE plans to build a 350 megawatt (MW) wind farm off the coast of Southern New Jersey (two digit SIC Code of 49). Prior to construction of the wind farm, it is essential to collect and analyze site-specific data to use in engineering and designing the wind farm, as described above. As such, GSOE is proposing to construct and operate a MET Station, approximately 20 miles offshore. The location is shown in Figure 1. As shown in the figure, all activities will occur in federal Outer Continental Shelf (OCS) waters. The MET Station will be constructed on a platform no more than 70 feet above mean sea level (final design and engineering will determine exact platform height) and will be located at or near the following location:

MMS Block 7033 - 39° 04' 42" N 74° 18' 34" W



Figure 1. MET Station Location



Estimated Emissions

The MET Station project will consist of three phases: construction, operation, and decommission.

Construction

Estimated emissions during construction of the Met Station were evaluated and are summarized in Tables A-1 through A-4. Refer to Appendix A for complete details on construction equipment and emission calculations. Appendix A also contains estimates on the types of fuel used in the equipment. No add-on air pollution equipment is proposed for the construction equipment. Construction is expected to occur over a period of approximately 20 days spread over a period of one to two months. Thus, the equipment listed above will only be on or near the project site for approximately 20 days.

Operation

Emissions during operation of the tower will be minimal since the tower does not contain any large air pollutant emitting sources. Power to operate the instruments on the tower will be provided by batteries, solar panels, and/or onsite diesel generators¹. If diesel

¹ GSOE has not finalized design for the MET Station because of uncertainty regarding Commercial Leasing requirements.

generators are deployed, there will be two 9 kilowatt diesel generators on the platform, with the second generator acting as a back-up to the first. In addition, there will be a 1,000 gallon diesel storage tank to service the generators. No add-on air pollution equipment is proposed for the diesel generators. During the operational period, GSOE will use a crew boat to service and maintain the MET Station as needed.

Detailed emission calculations and equipment specifications are presented in Appendix A. For purposes of calculating emissions, GSOE has used conservative assumptions regarding the potential equipment to be deployed.

Decommission and Removal

Prior to the end of the service life and/or limited lease term of the MET Station, GSOE will submit to the MMS for review and approval a decommissioning application detailing the decommissioning schedule, methods, and potential impacts resulting from decommissioning activities on the surrounding environment. Removal of the MET Station will involve dismantling and removing instrumentation, the met tower and ancillary equipment, and deck platform. The tower will be removed in sections using a barge-mounted crane similar to the method employed during construction. All materials will be removed by barge and transported to shore. GSOE estimates that decommissioning and removal activities will take approximately 20 days spread over a period of one to two months. Estimated emissions during decommission of the meteorological station are assumed to be equal to the emissions during construction.

Total emissions from the met tower project are summarized in the following table.

Pollutant	Emissions (tons/year)			
	Construction	Operation	Decommission	Total ¹
NO _x	9.15	0.65	9.15	9.80
CO	8.08	0.57	8.08	8.65
VOC	4.69	0.65	4.69	5.34
SO ₂	0.034	0.004	0.034	0.04
PM	0.29	0.07	0.29	0.36
PM-10	0.29	0.07	0.29	0.36
PM-2.5	0.29	0.07	0.29	0.36

¹ Total annual emissions are the sum of emissions during construction OR decommission (since the construction and decommission phases will not occur within the same year) and emissions during operation.

² Proposed limitations (e.g. fuel sulfur content, equipment operating hours) are identified in Appendix A.

³ Since air dispersion modeling is not required, information regarding stack parameters is not included.

Potential emissions from the project will be below applicable Prevention of Significant Deterioration (PSD), Non-attainment New Source Review (NNSR), and Title V thresholds. Should you have any questions regarding this NOI please contact me at (201) 933-5541, extension 142 or Mr. Erin Gorman, P.E. of PSEG at (973) 430-6359.

Sincerely,

TRC



Carla Adduci
Principal Air Quality Engineer

Attachment

cc: E. Gorman, PSEG Services Corp.
F. Steitz, NJDEP



Appendix A

Equipment Details and Emission Calculations

Table A-1
Garden State Offshore Energy
Construction Equipment List

Equipment Make/Model ¹	Maximum Rated Power		Heat Input	Operating Hours	Purpose
	hp	kW	MMBtu/hr		
Caterpillar 398 ²	1001	746	7.01	150	Main generator set - Used to power the Derrick Barge
Caterpillar 3508 ²	1014	756	7.10	150	Main generator set - Used to power the Derrick Barge
Caterpillar 3412	1050	783	7.35	150	Emergency generator
Caterpillar 3412	1050	783	7.35	150	Used to run main hoist
Detroit Diesel 1271	870	649	6.09	90	Anchor winch engine - Used during anchoring operations only
Detroit Diesel 1271	870	649	6.09	90	Anchor winch engine - Used during anchoring operations only
Detroit Diesel 6-71	362	270	2.53	50	Rescue boat - used if needed
Yamaha 4 Cycle Outboard	50	37	0.35	50	Aluminum skiff - used if needed
Cummins 6CTA 8.3	430	321	3.01	250	Crane engine
Detroit Diesel 12.7 L 6064MK33	500	373	3.50	50	Jet pump engine
Cummins 505/8.3	430	321	3.01	50	Air compressor - used during jetting
John Deere 4.5 L PE4045TT0550	99	74	0.69	50	Ballast pump engine
Detroit Diesel 16V149 TIB	1800	1342	12.60	150	Main drive engine - used during move & demove
Detroit Diesel 16V149 TIB	1800	1342	12.60	150	Main drive engine - used during move & demove

¹ All engines will combust marine diesel fuel

² The Caterpillar 398 and the Caterpillar 3508 will not run simultaneously. The worst-case emission factors were used for estimating emissions.

Table A-2
Garden State Offshore Energy
Construction Equipment Emission Factors

Equipment Make/Model	Emission Factors										
	NOx		CO		VOC		PM/PM-10/ 2.5	PM- 2.5	SO2¹	Source	
Caterpillar 398	6.4	g/kW-hr	3.5	g/kW-hr	6.4	g/kW-hr	0.2	g/kW-hr	0.0071	lb/MMBtu	EPA Tier 2
Caterpillar 3508	9.2	g/kW-hr	11.4	g/kW-hr	1.3	g/kW-hr	0.54	g/kW-hr	0.0071	lb/MMBtu	EPA Tier 1
Caterpillar 3412	8.6	g/hp-hr	0.64	g/hp-hr	0.06	g/hp-hr	0.086	g/hp-hr	0.0071	lb/MMBtu	Vendor Sheet
Caterpillar 3412	8.6	g/hp-hr	0.64	g/hp-hr	0.06	g/hp-hr	0.086	g/hp-hr	0.0071	lb/MMBtu	Vendor Sheet
Detroit Diesel 1271	9.2	g/kW-hr	11.4	g/kW-hr	1.3	g/kW-hr	0.54	g/kW-hr	0.0071	lb/MMBtu	EPA Tier 1
Detroit Diesel 1271	9.2	g/kW-hr	11.4	g/kW-hr	1.3	g/kW-hr	0.54	g/kW-hr	0.0071	lb/MMBtu	EPA Tier 1
Detroit Diesel 6-71	9.2	g/kW-hr	11.4	g/kW-hr	1.3	g/kW-hr	0.54	g/kW-hr	0.0071	lb/MMBtu	EPA Tier 1
Yamaha 4 Cycle Outboard	7.5	g/kW-hr	5	g/kW-hr	7.5	g/kW-hr	0.4	g/kW-hr	0.0071	lb/MMBtu	EPA Tier 2
Cummins 6CTA 8.3	6.4	g/kW-hr	3.5	g/kW-hr	6.4	g/kW-hr	0.2	g/kW-hr	0.0071	lb/MMBtu	EPA Tier 2
Detroit Diesel 12.7 L 6064MK33	6.4	g/kW-hr	3.5	g/kW-hr	6.4	g/kW-hr	0.2	g/kW-hr	0.0071	lb/MMBtu	EPA Tier 2
Cummins 505/8.3	6.4	g/kW-hr	3.5	g/kW-hr	6.4	g/kW-hr	0.2	g/kW-hr	0.0071	lb/MMBtu	EPA Tier 2
John Deere 4.5 L PE4045TT0550	7.5	g/kW-hr	5	g/kW-hr	7.5	g/kW-hr	0.4	g/kW-hr	0.0071	lb/MMBtu	EPA Tier 2
Detroit Diesel 16V149 TIB	6.4	g/kW-hr	3.5	g/kW-hr	6.4	g/kW-hr	0.2	g/kW-hr	0.0071	lb/MMBtu	EPA Tier 2
Detroit Diesel 16V149 TIB	6.4	g/kW-hr	3.5	g/kW-hr	6.4	g/kW-hr	0.2	g/kW-hr	0.0071	lb/MMBtu	EPA Tier 2

¹ SO₂ emission factor based on mass balance of sulfur in fuel:

Sulfur Content	0.05	% sulfur
Higher Heating Value	140,000	Btu/Gal
Assumed Heat Rate	7,000	Btu/hp-hr
Molecular Weight of S =	32	lb/lbmol
Molecular Weight of SO ₂ =	64	lb/lbmol

Table A-3
Garden State Offshore Energy
Meteorological Station Emissions from Construction

Equipment Make/Model	Emissions (tons/yr)				
	NO _x	CO	VOC	PM/PM-10/ 2.5	PM- SO ₂ ^{2,3}
Caterpillar 398/Caterpillar 3508 ¹	1.150	1.425	0.790	0.068	0.004
Caterpillar 3412	1.493	1.493	0.010	0.015	0.004
Caterpillar 3412	1.493	1.493	0.010	0.015	0.004
Detroit Diesel 1271	0.592	0.734	0.084	0.035	0.002
Detroit Diesel 1271	0.592	0.734	0.084	0.035	0.002
Detroit Diesel 6-71	0.137	0.170	0.019	0.008	4.53E-04
Yamaha 4 Cycle Outboard	0.015	0.010	0.015	0.0008	6.25E-05
Cummins 6CTA 8.3	0.566	0.309	0.566	0.018	0.003
Detroit Diesel 12.7 L 6064MK33	0.132	0.072	0.132	0.004	6.25E-04
Cummins 505/8.3	0.113	0.062	0.113	0.004	5.38E-04
John Deere 4.5 L PE4045TT0550	0.031	0.020	0.031	0.002	1.24E-04
Detroit Diesel 16V149 TIB	1.420	0.777	1.420	0.044	0.007
Detroit Diesel 16V149 TIB	1.420	0.777	1.420	0.044	0.007
Total Met Tower Installation Emissions	9.154	8.076	4.694	0.291	0.034

¹ The Caterpillar 398 and the Caterpillar 3508 will not run simultaneously. The worst-case emission factors were used for estimating emissions.

² All engines will combust marine diesel fuel with a maximum sulfur content of 0.05% sulfur by weight.

³ Emissions of SO₂ based on mass balance of sulfur in fuel:

Sulfur Content	0.05	% sulfur
Higher Heating Value	140,000	Btu/Gal
Assumed Heat Rate ⁴	7,000	Btu/hp-hr
Molecular Weight of S =	32	lb/lbmol
Molecular Weight of SO ₂ =	64	lb/lbmol

⁴ Assumed heat rate from AP-42.

Table A-4
Garden State Offshore Energy
Meteorological Station Emissions from Operation

Engine parameters

Number of Engines ¹	2	
Power output base load	9	kW
Fuel Firing Rate	0.93	Gal/hr
Heat Input Rate	0.13	MMBtu/hr
Maximum Operation	8760	hr/yr

Pollutant	Potential Emissions			Total Annual Emissions (ton/yr)
	g/kW-hr ²	lb/MMBtu	lb/hr	
NO _x	7.500		0.15	0.65
CO	6.600		0.13	0.57
VOC	7.500		0.15	0.65
PM	0.800		0.02	0.07
SO ₂ ^{3, 4}		0.0071	0.001	4.07E-03

¹ Only 1 generator will operate at a time.

² Generators will be EPA Tier 3 compliant. Vendor sheet lists NO_x + HC emissions as equal to 7.5 g/kW-hr. Since emissions were not listed individually, each pollutant was conservatively assumed to be equal to limit.

³ Emissions of SO₂ based on mass balance of sulfur in fuel:

Sulfur Content	0.05	% sulfur
Higher Heating Value	140,000	Btu/Gal
Assumed Heat Rate	7,000	Btu/hp-hr
Molecular Weight of S =	32	lb/lbmol
Molecular Weight of SO ₂ =	64	lb/lbmol

⁴ NSPS Subpart IIII limits the sulfur content of fuel to 500 ppm until May 31, 2010. Beginning on June 1, 2010 the maximum sulfur content of the fuel will be 0.0015% sulfur, by weight.

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification

User Identification:	1000 Gal Tank 001
City:	
State:	
Company:	
Type of Tank:	Horizontal Tank
Description:	

Tank Dimensions

Shell Length (ft):	7.60
Diameter (ft):	8.70
Volume (gallons):	800.00
Turnovers:	10.18
Net Throughput(gal/yr):	8,146.80
Is Tank Heated (y/n):	N
Is Tank Underground (y/n):	N

Paint Characteristics

Shell Color/Shade:	Red/Primer
Shell Condition	Good

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig)	0.03

Meteorological Data used in Emissions Calculations: Atlantic City C.O., New Jersey (Avg Atmospheric Pressure = 14.72 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

1000 Gal Tank 001 - Horizontal Tank

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F)			Liquid Bulk Temp (deg F)	Vapor Pressure (psia)			Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
		Avg.	Min.	Max.		Avg.	Min.	Max.					
Distillate fuel oil no. 2	Jan	51.92	45.59	58.24	58.52	0.0049	0.0039	0.0061	130.0000			188.00	Option 1: VP50 = .0045 VP60 = .0065
Distillate fuel oil no. 2	Feb	54.57	46.67	62.47	58.52	0.0054	0.0040	0.0071	130.0000			188.00	Option 1: VP50 = .0045 VP60 = .0065
Distillate fuel oil no. 2	Mar	60.07	50.11	70.03	58.52	0.0065	0.0045	0.0090	130.0000			188.00	Option 1: VP60 = .0065 VP70 = .009
Distillate fuel oil no. 2	Apr	65.97	53.95	77.99	58.52	0.0080	0.0053	0.0114	130.0000			188.00	Option 1: VP60 = .0065 VP70 = .009
Distillate fuel oil no. 2	May	71.55	58.27	84.83	58.52	0.0095	0.0062	0.0139	130.0000			188.00	Option 1: VP70 = .009 VP80 = .012
Distillate fuel oil no. 2	Jun	76.48	62.22	90.74	58.52	0.0109	0.0071	0.0164	130.0000			188.00	Option 1: VP70 = .009 VP80 = .012
Distillate fuel oil no. 2	Jul	78.60	64.80	92.40	58.52	0.0116	0.0077	0.0174	130.0000			188.00	Option 1: VP70 = .009 VP80 = .012
Distillate fuel oil no. 2	Aug	77.17	64.52	89.83	58.52	0.0112	0.0076	0.0159	130.0000			188.00	Option 1: VP70 = .009 VP80 = .012
Distillate fuel oil no. 2	Sep	72.39	61.56	83.21	58.52	0.0097	0.0069	0.0133	130.0000			188.00	Option 1: VP70 = .009 VP80 = .012
Distillate fuel oil no. 2	Oct	65.53	56.59	74.47	58.52	0.0079	0.0058	0.0103	130.0000			188.00	Option 1: VP60 = .0065 VP70 = .009
Distillate fuel oil no. 2	Nov	58.98	52.21	65.75	58.52	0.0063	0.0049	0.0079	130.0000			188.00	Option 1: VP50 = .0045 VP60 = .0065
Distillate fuel oil no. 2	Dec	53.89	48.04	59.73	58.52	0.0053	0.0042	0.0064	130.0000			188.00	Option 1: VP50 = .0045 VP60 = .0065

TANKS 4.0.9d **Emissions Report - Detail Format** **Detail Calculations (AP-42)**

1000 Gal Tank 001 - Horizontal Tank

Month:	January	February	March	April	May	June	July	August	September	October	November	December
Standing Losses (lb):	0.0469	0.0591	0.0986	0.1394	0.1853	0.2192	0.2299	0.2032	0.1482	0.1042	0.0613	0.0461
Vapor Space Volume (cu ft):	287.7679	287.7679	287.7679	287.7679	287.7679	287.7679	287.7679	287.7679	287.7679	287.7679	287.7679	287.7679
Vapor Density (lb/cu ft):	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0003	0.0003	0.0002	0.0002	0.0001	0.0001
Vapor Space Expansion Factor:	0.0455	0.0576	0.0729	0.0878	0.0964	0.1030	0.0991	0.0908	0.0778	0.0643	0.0483	0.0416
Vented Vapor Saturation Factor:	0.9989	0.9988	0.9985	0.9982	0.9978	0.9975	0.9973	0.9974	0.9978	0.9982	0.9986	0.9988
Tank Vapor Space Volume:												
Vapor Space Volume (cu ft):	287.7679	287.7679	287.7679	287.7679	287.7679	287.7679	287.7679	287.7679	287.7679	287.7679	287.7679	287.7679
Tank Diameter (ft):	8.7000	8.7000	8.7000	8.7000	8.7000	8.7000	8.7000	8.7000	8.7000	8.7000	8.7000	8.7000
Effective Diameter (ft):	9.1777	9.1777	9.1777	9.1777	9.1777	9.1777	9.1777	9.1777	9.1777	9.1777	9.1777	9.1777
Vapor Space Outage (ft):	4.3500	4.3500	4.3500	4.3500	4.3500	4.3500	4.3500	4.3500	4.3500	4.3500	4.3500	4.3500
Tank Shell Length (ft):	7.6000	7.6000	7.6000	7.6000	7.6000	7.6000	7.6000	7.6000	7.6000	7.6000	7.6000	7.6000
Vapor Density												
Vapor Density (lb/cu ft):	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0003	0.0003	0.0002	0.0002	0.0001	0.0001
Vapor Molecular Weight (lb/lb-mole):	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0049	0.0054	0.0065	0.0080	0.0095	0.0109	0.0116	0.0112	0.0097	0.0079	0.0063	0.0053
Daily Avg. Liquid Surface Temp. (deg. R):	511.5864	514.2443	519.7387	525.6370	531.2168	536.1535	538.2702	536.8421	532.0568	525.1995	518.6520	513.5559
Daily Average Ambient Temp. (deg. F):	33.1500	35.1500	42.4000	50.7000	59.6500	68.3500	74.2000	73.9000	67.8000	57.6500	48.2500	39.0000
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731
Liquid Bulk Temperature (deg. R):	518.1933	518.1933	518.1933	518.1933	518.1933	518.1933	518.1933	518.1933	518.1933	518.1933	518.1933	518.1933
Tank Paint Solar Absorptance (Shell):	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Daily Total Solar Insulation Factor (Btu/sqft day):	648.1826	901.0468	1,228.7867	1,548.2776	1,781.7883	1,939.4715	1,874.4312	1,690.0973	1,391.2290	1,051.1155	708.1466	562.2024
Vapor Space Expansion Factor:												
Vapor Space Expansion Factor:	0.0455	0.0576	0.0729	0.0878	0.0964	0.1030	0.0991	0.0908	0.0778	0.0643	0.0483	0.0416
Daily Vapor Temperature Range (deg. R):	25.2967	31.5981	39.8374	48.0871	53.1142	57.0436	55.2068	50.6132	43.3094	35.7698	27.0790	23.3701
Daily Vapor Pressure Range (psia):	0.0023	0.0031	0.0045	0.0061	0.0078	0.0094	0.0097	0.0083	0.0064	0.0045	0.0030	0.0022
Breather Vent Press. Setting Range (psia):	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0049	0.0054	0.0065	0.0080	0.0095	0.0109	0.0116	0.0112	0.0097	0.0079	0.0063	0.0053
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.0039	0.0040	0.0045	0.0053	0.0062	0.0071	0.0077	0.0076	0.0069	0.0058	0.0049	0.0042
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.0061	0.0071	0.0090	0.0114	0.0139	0.0164	0.0174	0.0159	0.0133	0.0103	0.0079	0.0064
Daily Avg. Liquid Surface Temp. (deg R):	511.5864	514.2443	519.7387	525.6370	531.2168	536.1535	538.2702	536.8421	532.0568	525.1995	518.6520	513.5559
Daily Min. Liquid Surface Temp. (deg R):	505.2623	506.3448	509.7793	513.6152	517.9383	521.8926	524.4685	524.1888	521.2294	516.2570	511.8823	507.7134
Daily Max. Liquid Surface Temp. (deg R):	517.9106	522.1438	529.6980	537.6588	544.4954	550.4144	552.0719	549.4954	542.8842	534.1419	525.4218	519.3984
Daily Ambient Temp. Range (deg. R):	12.7000	12.7000	12.8000	13.2000	12.1000	12.1000	11.8000	11.8000	12.0000	13.3000	13.1000	13.0000
Vented Vapor Saturation Factor:												
Vented Vapor Saturation Factor:	0.9989	0.9988	0.9985	0.9982	0.9978	0.9975	0.9973	0.9974	0.9978	0.9982	0.9986	0.9988
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0049	0.0054	0.0065	0.0080	0.0095	0.0109	0.0116	0.0112	0.0097	0.0079	0.0063	0.0053
Vapor Space Outage (ft):	4.3500	4.3500	4.3500	4.3500	4.3500	4.3500	4.3500	4.3500	4.3500	4.3500	4.3500	4.3500
Working Losses (lb):	0.0103	0.0114	0.0137	0.0168	0.0199	0.0230	0.0243	0.0234	0.0204	0.0166	0.0132	0.0111
Vapor Molecular Weight (lb/lb-mole):	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0049	0.0054	0.0065	0.0080	0.0095	0.0109	0.0116	0.0112	0.0097	0.0079	0.0063	0.0053
Net Throughput (gal/mo.):	678.9000	678.9000	678.9000	678.9000	678.9000	678.9000	678.9000	678.9000	678.9000	678.9000	678.9000	678.9000
Annual Turnovers:	10.1835	10.1835	10.1835	10.1835	10.1835	10.1835	10.1835	10.1835	10.1835	10.1835	10.1835	10.1835
Turnover Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Tank Diameter (ft):	8.7000	8.7000	8.7000	8.7000	8.7000	8.7000	8.7000	8.7000	8.7000	8.7000	8.7000	8.7000
Working Loss Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total Losses (lb):	0.0572	0.0705	0.1123	0.1562	0.2052	0.2422	0.2542	0.2267	0.1686	0.1207	0.0745	0.0572

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: January, February, March, April, May, June, July, August, September, October, November, December

1000 Gal Tank 001 - Horizontal Tank

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Distillate fuel oil no. 2	0.20	1.54	1.75

ORIGINAL REPORT

2009 SEP 17 AM 11:55

DEPP-APB